Nonlinear Sciences > Exactly Solvable and Integrable Systems

On integrability of variable coefficient nonlinear Schrodinger equations

[Cihangir Ozemir](), [Faruk Gungor]()

(Submitted on 6 Apr 2010)

We apply Painlev\'e test to the most general variable coefficient nonlinear Schrodinger (VCNLS) equations as an attempt to identify integrable classes and compare our results versus those obtained by the use of other tools like group-theoretical approach and the Lax pairs technique of the soliton theory. We present explicit transformation formulae that can be used to generate new analytic solutions of VCNLS equations from those of the integrable NLS equation.

Comments: 19 pages
Subjects: **Exactly Solvable and Integrable Systems (nlin.SI)**
Cite as: **arXiv:1004.0852v1 [nlin.SI]**

Submission history

From: Cihangir Ozemir [view email]
[v1] Tue, 6 Apr 2010 13:52:56 GMT (16kb)

Which authors of this paper are endorsers?

Link back to: arXiv, form interface, contact.

References & Citations

- NASA ADS